Listing of Claims

This listing or claims will replace all prior versions, and listings, of claims in this application:

We Claim:

1. (Presently Amended) A wetness monitoring apparatus for detecting wetness of an individual at a location of potential wetness, said wetness monitoring apparatus comprising:

a sensor formed by spaced conductors and an absorbent material, said conductors being spaced to produce an amount of resistance between said conductors, said absorbent material extending between said conductors and being adapted to absorb an amount of wetness, said amount of resistance between said conductors decreasing as said amount of wetness absorbed by said absorbent material increases, said sensor having an actual wetness value indicative of said amount of wetness absorbed by said absorbent material between said conductors, and said sensor being adapted for placement against the individual at the location of potential wetness;

a data collector having a data compiling processor, electric circuit, radio frequency communication device and power source, said circuit including said spaced conductors of said sensor, said data compiling processor being programmed to use said circuit to obtain wetness measurement data corresponding to said actual wetness value of said sensor, and said data collector periodically generating and transmitting a data signal containing said wetness measurement data via said communication device; and,

a control station having a receiver, control processor and an associated memory containing a predetermined wetness value, said receiver receiving said periodic signals containing said wetness measurement data, said control processor being programmed to compare each of said wetness measurement data with said predetermined wetness value, said control processor being further programmed to determine that a wetness event has occurred when a

predetermined number of said wetness measurement data exceed said predetermined wetness value.

2. (Original) The wetness monitoring apparatus of Claim 1, and wherein said control processor is programmed to store said wetness measurement data in its said associated memory.

3. (Original) The wetness monitoring apparatus of Claim 1, and wherein said control processor determines that a wetness event has occurred when said predetermined number of said wetness measurement data fall below said predetermined wetness value.

4. (Original) The wetness monitoring apparatus of Claim 1, and wherein said data compiling processor is programmed to use said circuit at spaced intervals of time to obtain said wetness measurement data, and wherein each of said wetness measurement data are taken at separate points of time, each of said wetness measurement data corresponding to said actual wetness value of said sensor at said point of time.

5. (Original) The wetness monitoring apparatus of Claim 4, and wherein said predetermined number of said wetness measurement data are a consecutive series of wetness measurement data.

6. (Original) The wetness monitoring apparatus of Claim 4, and wherein said data collector includes a data memory, and said data compiling processor is programmed to store each of said

wetness measurement data in said data memory, and each of said data signals contains a plurality of said wetness measurement data in said data memory.

7. (Original) The wetness monitoring apparatus of Claim 6, and wherein said data compiling processor is programmed to retain only a given number of wetness measurement data in said data memory, said given number of wetness measurement data being said wetness measurement data obtained most recently by said data compiling processor, and wherein each of said data signals contains each of said given number of wetness measurement data in said data memory.

8. (Presently Amended) The wetness monitoring apparatus of Claim 6[1], and wherein said memory of said data collector contains a predetermined power conservation value, said data compiling processor comparing each of said wetness measurement data with said power conservation value, said data collector being programmed to generate and transmit said data signals at a first rate when said wetness measurement data is above said power conservation value, and at a second rate when one of said wetness measurement data falls below said power conservation value.

9. (Presently Amended) The wetness monitoring apparatus of Claim 1, and wherein a number of said wetness monitoring apparatus are [is] used for a number of individuals, and wherein said predetermined wetness value in said memory of said control processor is one of at least two separate sensitivity levels, and said control processor is programmed to allow one of

the individuals to have a first sensitivity level and another individual to have a second sensitivity level.

10. (Original) The wetness monitoring apparatus of Claim 1, and wherein said wetness monitoring apparatus is for a number of individuals and a number of healthcare workers, each healthcare worker being assigned to at least one specific individual, and wherein each individual has an associated data collector, and each of said data collectors sends periodic signals having a unique code that identifies the associated individual, and further includes a paging transmitter and a number of pagers, each healthcare worker having one of said pagers, and said control processor is programmed to use said paging transmitter to send a signal to said pager of the healthcare workers assigned to the specific individual having said wetness event.

11. (Original) The wetness monitoring apparatus of Claim 1, and wherein said absorbent material is formed by a garment worn by the individual.

12. (Original) The wetness monitoring apparatus of Claim 1, and wherein said data compiling processor applies a voltage potential across said circuit, and said wetness measurement data is resistance measurement data.

13. (Original) The wetness monitoring apparatus of Claim 1, and wherein said sensor is removable from said data collector, and said data collector is provided with contacts, each contact being adapted to electrically engage a corresponding conductor of said spaced

conductors, and a sensor fastener for removably securing said sensor to said data collector with each of said contacts in electrical communication with its said corresponding conductor.

14. (Original) The wetness monitoring apparatus of Claim 13, and wherein said data collector has a second electric circuit for determining when said sensor is properly secured to said data collector and a second communication device, said data compiling processor being programmed to use said second circuit to detect an event when said contacts of said data collector are in electrical engagement with said conductors of said sensor and to use said second communication device to communicate that said event has occurred.

15. (Original) The wetness monitoring apparatus of Claim 14, and wherein said data collector is provided with a garment fastener for removably securing said data collector to a garment worn by the individual.

16. (Original) The wetness monitoring apparatus of Claim 1, and wherein said resistance between said spaced conductors is substantially infinite when said absorbent material is in a dry condition, and said data compiling processor is programmed to designate a predetermined maximum wetness value for said actual wetness measurement value when in said dry condition.

17. (Original) The wetness monitoring apparatus of Claim 1, and wherein said sensor is a strip and said absorbent material is a pad.

18. (Presently Amended) The wetness monitoring apparatus of Claim 17 [16], and wherein said sensor strip includes a backing layer, and said spaced conductors are sandwiched between and enclosed by said absorbent pad and said backing layer.

19. (Presently Amended) The wetness monitoring apparatus of Claim 1, and wherein said radio frequency communication device is a radio frequency transmitter.

20. (Presently Amended) A method of detecting wetness on an individual, said method of detecting wetness comprising the steps of:

providing a sensor formed by an absorbent material and spaced conductors, said conductors being spaced to produce an amount of resistance between said conductors, said absorbent material extending between said conductors and being adapted to absorb an amount of wetness, said amount of resistance between said conductors decreasing as said amount of wetness absorbed by said absorbent material increases, said sensor having an actual wetness value indicative of said amount of wetness absorbed by said absorbent material between said conductors, a data collector having a data compiling processor, electric circuit, communication device and power source, said circuit including said spaced conductors, and a control station having a receiver, control processor and associated memory containing a predetermined wetness value;

placing said sensor against the individual;

periodically obtaining wetness measurement data from said sensor at spaced intervals of time via said data collector, each of said wetness measurement data having a value indicative of said amount of wetness absorbed by said absorbent material at its corresponding interval of time;

periodically generating and transmitting said wetness measurement data from said data collector via said communication device to said control station via said receiver;

comparing each of said wetness measurement data with said predetermined wetness value;

determining that a wetness event has occurred when a predetermined number of said wetness measurement data exceed said predetermined wetness value; and,

communicating that said wetness event has occurred via [said] a communication device of said control station.

21. (Original) The method of detecting wetness of Claim 20, and further including the step of storing said wetness measurement data in said associated computer of said control processor.

22. (Original) The method of detecting wetness of Claim 20, and wherein said associated memory of said control processor has a second predetermined wetness value, and further including a step of determining that a change event has occurred when said control processor receives wetness measurement data above a second predetermined value subsequent to a wetness event.

23. (Original) The method of detecting wetness of Claim 22, and wherein said control processor has an associated clock, and further including the steps of time stamping said wetness event, time stamping said change event, calculating a duration of time between said wetness and change events, and communicating said duration of time via said communication device of said control station.

24. (Original) The method of detecting wetness of Claim 20, and wherein said data collector includes a data memory, and further including the step of storing each of said wetness measurement data in said data memory, each of said data signals containing a given number of said wetness measurement data stored in said data memory.

25. (Original) The method of detecting wetness of Claim 24, and wherein said given number of wetness measurement data contained in one of said signals is fewer than said predetermined number of wetness measurement data needed to determine that a wetness event has occurred.

26. (Original) The method of detecting wetness of Claim 20, and wherein said data collector has a data memory containing a predetermined power conservation value, and further including the step of comparing each of said wetness measurement data with said power conservation value, said data collector generating and transmitting said data signals at a first rate when said wetness measurement data is above said power conservation value, and at a second rate when one of said wetness measurement data falls below said power conservation value.

27. (Original) The method of detecting wetness of Claim 20, and wherein said method of detecting wetness is for at least two different individuals, and further including a step of selecting said predetermined wetness value in said memory of said control processor from one of at least two sensitivity levels, a first sensitivity level being selected for one of the individuals and a second sensitivity level being selected for another of the individuals.

28. (Original) The method of detecting wetness of Claim 20, and further including the steps of removably connecting said sensor to said data collector to obtain wetness measurement data, disconnecting said sensor from said data collector after a wetness event has occurred, cleaning said sensor, and removably connecting said cleaned sensor to said data collector to obtain wetness measurement data.

29. (Original) The method of detecting wetness of Claim 20, and wherein said communication device of said control station includes a paging transmitter and a healthcare worker with a pager, and said step of communicating that said wetness event has occurred includes using said paging transmitter to send a page signal to said pager of the healthcare worker, said page signal containing a message indicating that the individual has had said wetness event.

30. (Original) The method of detecting wetness of Claim 20, and wherein said step of placing said sensor against the individual requires said sensor to be placed directly against the individual.

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